Kindly amend the claims as follows:

1. (Previously Amended) Extrusion die apparatus, for manufacturing blown plastic film, wherein: the apparatus includes a die-member; the die-member is of generally annular form, having a circumferentially-disposed outer-face and inner-face; the die-member has a groove-face-A, which is of annular configuration, and which has an inner-edge-A; the groove-face-A is formed with melt-conveying-channels-A; the die-member includes a melt-entry-port, which is located in the outer-face of the die-member; the apparatus includes an annular groove-opposing-surface-A; the melt-conveying-channels-A include N spiral-grooves-A, which are open, and are formed into the groove-face-A; the apparatus is so arranged that melt, in flowing towards the inner-edge-A, spills over lands between turns of the spiral-grooves-A; the melt-conveying-channels-A are arranged, in relation to the groove-opposing-surface-A, for conveying liquid melt under pressure from the melt-entry-port in the outer-face, in a progressively inwards sense, through the spiral-grooves-A, to the inner-edge-A of the groove-face-A; the melt-conveying-channels-A include at least N supply-channels-A; the melt-conveying-channels-A include flow-divider-channels-A, which receive melt from the melt-entry-port, and divide the same into at least N incoming-streams, and convey the incoming-streams one each into the supply-channels-A respectively; the melt-conveying-channels-A include flow-mixing-channels-A; the flow-mixing-channels-A include subdivider-junctions-A and recombiner-junctions-A; at the subdivider-junctions-A, respective ones of the at least N incoming-streams from the supply-channels-A are sub-divided into respective left and right subdivided-streams; the recombiner-junctions are positioned inwards of the subdivider-junctions, and between adjacent subdivider-junctions, in the sense of being positioned to receive the subdivided-streams moving inwards from the adjacent subdivider-junctions; the melt-conveying-channels are so configured that, in respect of each one of the recombiner-junctions, the recombiner-junction receives the left subdivided-stream from the adjacent one of the subdivider-junctions to the right of that recombiner-junction, and receives the right subdivided-stream from the adjacent one of the subdivider-junctions to the left of that recombiner-junction, and combines the said left and right subdivided-streams into one recombined-stream respective to that recombiner-junction; the

melt-conveying-channels-A include N of the recombiner-junctions, and the arrangement of the melt-conveying-channels is such that the N recombined-streams flow inwards, one each respectively, to the N spiral-grooves-A; and the

melt-conveying-channels-A are so arranged as to convey melt from the melt-entry-port in the outer-face inwards first through the flow-divider-channels, then inwards through the supply-channels-A, then inwards through the flow-mixing-channels-A, then inwards through the spiral-grooves-A, then inwards towards the inner-edge-A of the groove-face-A;

wherein the annular die-member has grooves both sides, in that: the die-member also has a groove-face-B, on the opposite thereof from groove-face-A; the groove-face-B is of annular configuration, and has an inner-edge-B; the groove-face-B is formed with melt-conveying-channels-B; the melt-conveying-channels-B include M spiral-grooves-B, which are open, and are formed into the groove-face-B; the melt-conveying-channels-B are arranged for conveying liquid melt under pressure from the melt-entry-port in the outer-face, in a progressively inwards sense, through the spiral-grooves-B, to the inner-edge-B of the groove-face-B; the melt-conveying-channels-A include at least M supply-channels-A; the melt-conveying-channels-B include flow-divider-channels-B, which receive melt from the melt-entry-port, and divide the same into at least M incoming-streams, and convey the incoming-streams one each into the supply-channels-A respectively; the melt-conveying-channels-B include flow-mixing-channels-B; the flow-mixing-channels-B include subdivider-junctions-B and recombiner-junctions -B; at the subdivider-junctions-B, respective ones of the at least M incoming-streams from the flow-divider-channels-B are subdivided into respective left and right subdivided-streams; the recombiner-junctions are positioned inwards of the subdivider-junctions, and between adjacent subdivider-junctions, in the sense of being positioned to receive the subdivided-streams moving inwards from the adjacent subdivider-junctions; the melt-conveying-channels are so configured that, in respect of each one of the recombiner-junctions, the recombiner-junction receives the left subdivided-stream from the adjacent one of the subdivider-junctions to the right of that recombiner-junction, and receives the right subdivided-stream from the adjacent one of the subdivider-junctions to the left of that recombiner-junction, and combines the said left and right subdivided-streams into one recombined-stream respective to that recombiner-junction;

the melt-conveying-channels-B include M of the recombiner-junctions, and the arrangement of the melt-conveying-channels is such that the M recombined-streams flow inwards, one each respectively, to the M spiral-grooves-B; and the melt-conveying-channels-B are so arranged as to convey melt from the melt-entry-port in the outer-face inwards first through the flow-divider-channels, then inwards though the supply-channels-B, then inwards through the flow-mixing-channels-B, then inwards through the spiral-grooves-B, then inwards towards the inner-edge-B of the groove-face-B;

wherein the N spiral-grooves-A have a spiral-sense that is clockwise when viewed from one side of the annular die-member; the M spiral-grooves-B have a spiral-sense that is also clockwise, when viewed from that same one side of the die-member.

2. (Previously Presented) Apparatus of claim 1, wherein N=a number in the series 2,4,8,16 .

3. (Previously Presented) Apparatus of claim 2, wherein N=4.

4. (Previously Presented) Apparatus of claim 1, wherein the groove-opposing-surface-A is a smooth flat plane, the groove-face-A being correspondingly flat.

5. (Previously Presented) Apparatus of claim 1, wherein the groove-opposing-surface-A is a concave frustum of a right cone, the groove-face-A being correspondingly convexly conical.

6. (Previously Presented) Apparatus of claim 1, wherein the flow-divider-channels-A and the flow-mixing-channels-A comprise open grooves, which are formed into the groove-face-A.

7. (Previously Amended) Apparatus of claim 1, wherein: the arrangement of the apparatus is such that the spiral-grooves receive liquid-melt that has passed from the melt-entry-port along respective pathways within the melt-conveying-channels-A; the respective pathways are of equal length, and of equal number of divisions and confluences, and of equal tortuous nesses.

8. (Previously Presented) Apparatus of claim 1, wherein: the N spiral-grooves-A include spiral-groove-F and spiral-groove-G, spiral-groove-G being the next-adjacent spiral-groove to the right of spiral-groove-F; start-groove-F is the respective start-channel-A to spiral-groove-F; start-groove-G is the respective start-channel-A to spiral-groove-G, whereby start-groove-G lies to the right of start-groove-F; supply/feed-junction-FG is the respective supply/feed-junction located between the start-channel-F and the start-channel-G; feed-groove-FG-F is the respective feed-channel that runs leftwards from the supply/feed-junction-FG to the start-groove-F; feed-groove-FG-G is the respective feed-channel that runs rightwards from the supply/feed-junction-FG to the start-groove-G; base-land-FG is the area bounded by and between the following grooves: spiral-groove-F; start-groove-F and start-groove-G; feed-groove-FG-F and feed-groove-FG-G; radial lines drawn on the annular groove-face-A, at a spiral-orientation relative to the datum-point, pass through both the spiral-groove-F and the spiral-groove-G, and through a spiral-land-FG there between; radial lines drawn on the annular groove-face-A, at a base-orientation relative to the datum, pass through spiral-groove-F, and do not pass through spiral-groove-G, and do pass through base-land-FG; the spiral-land-FG is of such height as to be clear of groove-opposing-surface-A, and to be so clear thereof that melt leaks and spills over the spiral-land-FG, out of spiral-groove-G, and inwards towards the inner-edge-A of the die-member; the base-land-FG is of such height as to be tight against the groove-opposing-surface-A, whereby substantially no leakage or spillage of melt occurs over the base-land-FG; the groove-face-A is formed with a step-FG, and the step-FG marks the change in height between the base-land-FG and the spiral-land-FG, in that the base-land-FG lies to the left, and the spiral-land-FG lies to the right, of the step-FG.

9. (Previously Presented) Apparatus of claim 8, wherein the change in height between the base-land-FG and the spiral-land-FG, at the step-FG, is at least one millimeter.

10. (Previously Presented) Apparatus of claim 8, wherein the step-FG is located adjacent to start-groove-G, in that: the step-FG marks a first portion of a right-side-boundary of the base-land-FG; the start-groove-G has a left edge and a right edge; the edges of the

start-groove-G lie approximately radially with respect to the annular groove-face-A; the left edge of start-groove-G marks a second portion of the right-side-boundary of the base-land-FG; the said first portion of the right-side-boundary of the base-land-FG is at least approximately contiguous with the said second portion.

11. (Previously Amended) Apparatus of claim 10, wherein the step-FG follows a line that lies, at least approximately, on a radius of the annular groove-face-A.

12. Cancelled.

13. Cancelled.

14. (Previously Amended) Apparatus of claim 1, wherein: the melt-conveying-channels-A include an entry-channel-A, which is in melt-conveying communication with, and receives melt from, the melt-entry-port; the entry-channel-A is in melt-conveying communication with N flow-divider-channels-A, which are so arranged as to split the flow from the melt-entry-port equally there between; the N flow-divider-channels are in melt-conveying communication respectively with the N supply-channels-A; the melt-conveying-channels-A are so arranged as to convey melt from the melt-entry-port to the entry-channel-A, then progressively inwards to the flow-divider-channels-A, and then inwards to the supply-channels.

15. (Previously Presented) Apparatus of claim 14, wherein: the die-member includes a melt-entry-channel-A, and the melt, in passing from the melt-entry-port in the outer-face to the melt conveying-channels-A, passes inwards through the melt-entry-channel-A; the die-member includes a melt-entry-channel-B, and the melt, in passing from the melt-entry-port in the outer-face to the melt conveying-channels-B, passes inwards through the melt-entry-channel-B; the arrangement of the apparatus is such that all melt entering the set of melt-conveying-channels-A is melt that has passed through melt-entry-channel-A, and all melt entering the set of melt-conveying-channels-B is melt that has passed through melt-entry-channel-B; the die-member includes a channel/groove-junction-A-, at which melt

from the melt-entry-channel-A transfers into the set of melt conveying-channels-A; the die-member includes a channel/groove-junction-B, at which melt from the melt-entry-channel-B transfers into the set of melt conveying-channels-B; with respect to a datum-point on the outer-face of the die-member, channel/groove-junction-- A lies orientated at an orientation-angle-A thereto, and channel/groove-junction-B lies orientated at an orientation-angle-B thereto; and the channel/groove-junction-A is staggered, circumferentially, with respect to channel/groove-junction-B, in that orientation-angle A is different from orientation-angle-B.

16. (Previously Presented) Apparatus of claim 15, wherein the melt-conveying-channels-A are correspondingly offset circumferentially, relative to the datum-point, from the melt-conveying-channels-B.

17. (Previously Presented) Apparatus of claim 15, wherein: the melt-entry-port includes one pipe-connector, whereby the melt-entry-port can be connected by a pipe to a source of pressurized hot melt; and both melt-entry-channel-A and melt-entry-channel-B are in melt-conveying communication with the one pipe-connector.

18. (Previously Amended) Apparatus of claim 15, wherein: the melt-entry-port includes pipe-connector-A and pipe-connector-B, whereby the melt-entry-port can be connected by pipes to sources of pressurized hot melt; pipe-connector-A and pipe-connector-B are separate from each other, within the die-member; melt-entry-channel-A is in melt-conveying communication with pipe-connector-A; and melt-entry-channel-B is melt-conveying communication with pipe-connector-B.

19. (Currently Amended) Extrusion die apparatus, for manufacturing blown plastic film, wherein: the apparatus includes a die-member; the die-member is of generally annular form, having a circumferentially-disposed outer-face and inner-face; the die-member has opposing side faces, comprising annular groove-face-A and annular groove-face-B, respectively; groove-face-A meets the inner-face at inner-edge-A, and groove-face-B meets the inner-face at inner-edge-B; groove-face-A is formed with a set of melt-conveying-channels-A, and

groove-face-B is formed with a set of melt-conveying-channels-B; the die-member includes a melt-entry-port, which is located in the circumferential outer-face of the die-member; the arrangement of the melt-conveying-channels-A is such that liquid melt passes under pressure from the melt-entry-port, inwards through the set of melt-conveying-channels-A, and inwards to, and over, the inner-edge-A; the arrangement of the melt-conveying-channel-B is such that liquid melt passes under pressure from the melt-entry-port, inwards through the set of melt-conveying-channels-B, and inwards to, and over, the-inner-edge-B; the die-member includes a melt-entry-channel-A, and the melt, in passing from the melt-entry-port in the outer-face to the set of melt-conveying-channels-A, passes inwards through the melt-entry-channel-A; the die-member includes a melt-entry-channel-B, and the melt, in passing from the melt-entry-port in the outer-face to the set of melt-conveying-channels-B, passes inwards through the melt-entry-channel-B; the arrangement of the apparatus is such that all melt entering the set of melt-conveying-channels-A is melt that has passed through melt-entry-channel-A, and all melt entering the set of melt conveying-channels-B is melt that has passed through melt-entry-channel-B; the die-member includes a channel/groove-junction-A- , at which melt from the melt-entry-channel-A transfers into the set of melt conveying-channels-A; the die-member includes a channel/groove-junction-B, at which melt from the melt-entry-channel-B transfers into the set of melt conveying-channels-B; with respect to a datum-point on the outer-face of the die-member, channel/groove-junction-- A lies orientated at an orientation-angle-A thereto, and channel/groove-junction-B lies orientated at an orientation-angle-B thereto; and the channel/groove-junction-A is ~~randomly~~ staggered, circumferentially, with respect to channel/groove-junction-B, in that orientation-angle-A is different from orientation-angle-B, <u>such that melt conveying-channels- A and melt-conveying-channels-B crisscross to de-equalize the orientation of melt conveying-channels-A relative to melt-conveying-channels-B.</u>

20. (Previously Amended) Extrusion die apparatus, for manufacturing blown plastic film, wherein: the apparatus includes a die-member; the die-member is of generally annular form, having a circumferentially-disposed outer-face and inner-face; the die-member has opposing side faces, comprising annular groove-face-A and annular groove-face-B, respectively;

groove-face-A meets the inner-face at inner-edge-A, and groove-face-B meets the inner-face at inner-edge-B; groove-face-A is formed with a set of melt-conveying-channels-A, and groove-face-B is formed with a set of melt-conveying-channels-B; the die-member includes a melt-entry-port, which is located in the circumferential outer-face of the die-member; the melt-conveying-channels-A include N spiral-grooves-A, which are open, and are formed into the groove-face-A; the apparatus is so arranged that melt, in flowing towards the inner-edge-A, spills over lands between turns of the spiral-grooves-A; the melt-conveying-channels-A are arranged for conveying liquid melt under pressure from the melt-entry-port in the outer-face, in a progressively inwards sense, through the spiral-grooves-A, to, and over, the inner-edge-A of the groove-face-A; the melt-conveying-channels-B include M spiral-grooves-B, which are open, and are formed into the groove-face-B; the apparatus is so arranged that melt, in flowing towards the inner-edge-B, spills over lands between turns of the spiral-grooves-B; the melt-conveying-channels-B are arranged for conveying liquid melt under pressure from the melt-entry-port in the outer-face, in a progressively inwards sense, through the spiral-grooves-B, to, and over, the inner-edge-B of the groove-face-B; the N spiral-grooves-A have a spiral-sense that is clockwise when viewed from one side of the annular die-member; the M spiral-grooves-B have a spiral-sense that is also clockwise, when viewed from that same one side of the die-member.

21. (Currently Amended) Extrusion die apparatus, for manufacturing blown plastic film, wherein: the apparatus includes a die-member; the die-member is of generally annular form, having a circumferentially-disposed outer-face and inner-face; the die-member has opposing side faces, comprising annular groove-face-A and annular groove-face-B, respectively; groove-face-A meets the inner-face at inner-edge-A, and groove-face-B meets the inner-face at inner-edge-B; groove-face-A is formed with a set of melt-conveying-channels-A, and groove-face-B is formed with a set of melt-conveying-channels-B; the die-member includes a melt-entry-port, which is located in the circumferential outer-face of the die-member; the melt-conveying-channels-A include N spiral-grooves-A, which are open, and are formed into the groove-face-A; the apparatus is so arranged that melt, in flowing towards the inner-edge-A, spills over lands between turns of the spiral-grooves-A; the

melt-conveying-channels-A are arranged for conveying liquid melt under pressure from the melt-entry-port in the outer-face, in a progressively inwards sense, through the spiral-grooves-A, to, and over, the inner-edge-A of the groove-face-A; the melt-conveying-channels-B include M spiral-grooves-B, which are open, and are formed into the groove-face-B; the apparatus is so arranged that melt, in flowing towards the inner-edge-B, spills over lands between turns of the spiral-grooves-B; the melt-conveying-channels-B are arranged for conveying liquid melt under pressure from the melt-entry-port in the outer-face, in a progressively inwards sense, through the spiral-grooves-B, to, and over, the inner-edge-B of the groove-face-B; with respect to a datum-point on the outer-face of the die-member, melt-conveying-channels-A in groove-face-A lie orientated at an orientation-angle-A thereto, and melt-conveying-channels-B in groove-face-B lie orientated at an orientation-angle-B thereto; and the groove-face-A is ~~randomly~~ staggered, circumferentially, with respect to the groove-face-B, in that orientation-angle-A is different from orientation-angle-B, such that melt conveying-channels- A and melt-conveying-channels-B crisscross to de-equalize the orientation of melt conveying-channels-A relative to melt-conveying-channels-B.

22. Cancelled.

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